

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
31 March 2005 (31.03.2005)

PCT

(10) International Publication Number  
**WO 2005/028625 A2**

(51) International Patent Classification<sup>7</sup>: C12N

(US). GAO, Feng [US/US]; 702 Country Club Drive, Durham, NC 27712 (US). LIAO, Hua-Xin [CN/US]; 200 Pebble Springs Road, Chapel Hill, NC 27514 (US).

(21) International Application Number:  
PCT/US2004/030397

(22) International Filing Date:  
17 September 2004 (17.09.2004)

(74) Agent: WILSON, Mary, J.; Nixon & Vanderhye P.C., 1100 North Glebe Road, Suite 800, Arlington, VA 22201-4714 (US).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/503,460 17 September 2003 (17.09.2003) US  
60/604,722 27 August 2004 (27.08.2004) US

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): DUKE UNIVERSITY [US/US]; P.O. Box 90083, Durham, NC 27708-0083 (US).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants and

(72) Inventors: KORBER, Bette, T. [US/US]; 1290 Big Rock Loop, Los Alamos, NM 87544 (US). HAHN, Beatrice, H. [DE/US]; 3571 Rockhill Road, Birmingham, AL 35223 (US). SHAW, George, M. [US/US]; 3571 Rockhill Road, Birmingham, AL 35223 (US). KOTHE, Denise [US/US]; 734 39th Street, Birmingham, AL 35222 (US). LI, Ying Ying [CN/US]; 2529 Mountain Cove, Hoover, AL 35266 (US). DECKER, Julie [US/US]; 1116 Colonial Drive, Alabaster, AL 35007 (US).

**Published:**

— without international search report and to be republished upon receipt of that report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): HAYNES, Barton, F. [US/US]; 3923 Wentworth Street, Durham, NC 27707

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: CONSENSUS/ANCESTRAL IMMUNOGENS

(57) Abstract: The present invention relates, in general, to an immunogen and, in particular, to an immunogen for inducing antibodies that neutralizes a wide spectrum of HIV primary isolates and/or to an immunogen that induces a T cell immune response. The invention also relates to a method of inducing anti-HIV antibodies, and/or to a method of inducing a T cell immune response, using such an immunogen. The invention further relates to nucleic acid sequences encoding the present immunogens.



WO 2005/028625 A2